

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A display device comprising:
a display panel comprising a switching element for every pixel electrode;
a scanning line driving circuit for driving scanning lines of said display panel;
a signal line driving circuit for driving signal lines of said display panel, said signal line driving circuit comprising a plurality of shift registers;
a control circuit including a delay circuit operationally connected to the signal line driving circuit; and
a video signal processing circuit operationally connected to the control circuit and the signal line driving circuit,
wherein the delay circuit produces a phase difference in a second signal with respect to a phase of a first signal which is input to each of said plurality of shift registers,
wherein said second signal is input to each of said plurality of shift registers to which said first signal is input, [[and]]
wherein said first signal has a reversed phase relation with said second signal,
wherein a length of said phase difference is at least a signal rise time period (tr) of said first signal or a signal fall time period (tf) of said first signal, and shorter than a half of a signal holding time period (tc), and
wherein noise due to said first signal and said second signal is reduced by said phase difference.

2. (Canceled)

3. (Original) A device according to claim 1, wherein each of said first signal and said second signal is a clock signal.

4. (Original) A device according to claim 1, wherein said first signal has a different rise time period (t_r) and a different signal fall time period (t_f) from said second signal.

5. (Currently Amended) A device according to claim 1, wherein [[a]] said signal rise time period (t_r) or [[a]] said signal fall time period (t_f) is equal to or shorter than [[a]] said half of [[a]] said signal holding time period (t_c).

6. (Currently Amended) A device according to claim 1, wherein said circuit for producing said phase difference in said second signal produces a phase difference corresponding to at least [[a]] said signal rise time period (t_r) of said first signal or [[a]] said signal fall time period (t_f) of said first signal.

7. (Previously Presented) A device according to claim 1, wherein said display device is a projection type display apparatus including a transmission type liquid crystal panel and a light source for projection.

8. (Currently Amended) A display device comprising:
a display panel comprising a switching element for every pixel electrode;
a scanning line driving circuit for driving scanning lines of said display panel;
a signal line driving circuit for driving signal lines of said display panel, said signal line driving circuit comprising a plurality of shift registers;
a control circuit for controlling driving of said display panel;
a video signal processing circuit; and

a circuit for producing a phase difference in a second signal with respect to a phase of a first signal which is input to each of said plurality of shift registers,
wherein each of said first signal and said second signal is a clock signal,
wherein said first signal has a reversed phase relation with said second signal,
wherein a signal rise time period (t_r) or a signal fall time period (t_f) is equal to or shorter than a half of a signal holding time period (t_c),
wherein said second signal is input to each of said plurality of shift registers to which said first signal is input, [[and]]
wherein a length of said phase difference is at least said signal rise time period (t_r) of said first signal or said signal fall time period (t_f) of said first signal, and shorter than said half of said signal holding time period (t_c), and
wherein noise due to said first signal and said second signal is reduced by said phase difference.

9. (Canceled)

10. (Previously Presented) A device according to claim 8, wherein said first signal has a different rise time period (t_r) and a different signal fall time period (t_f) from said second signal.

11. (Canceled)

12. (Currently Amended) A device according to claim 8, wherein said circuit for producing said phase difference in said second signal produces a phase difference corresponding to at least [[a]] said signal rise time period (t_r) of said first signal or [[a]] said signal fall time period (t_f) of said first signal.

13. (Previously Presented) A device according to claim 8, wherein said display device is a projection type display apparatus including a transmission type liquid crystal panel and a light source for projection.

14. (Currently Amended) A display device comprising:
a display panel comprising a switching element for every pixel electrode;
a scanning line driving circuit for driving scanning lines of said display panel;
a signal line driving circuit for driving signal lines of said display panel, said signal line driving circuit comprising a plurality of shift registers;
a control circuit for controlling driving of said display panel;
a video signal processing circuit; and
a circuit for producing a phase difference in a second signal with respect to a phase of a first signal wherein the first signal and the second signal are input to each of said plurality of shift registers,
wherein said first signal has a reversed phase relation with said second signal,
wherein a signal rise time period (t_r) or a signal fall time period (t_f) is equal to or shorter than a half of a signal holding time period (t_c), [[and]]
wherein a length of said phase difference is at least said signal rise time period (t_r) of said first signal or said signal fall time period (t_f) of said first signal, and shorter than said half of said signal holding time period (t_c), and
wherein noise due to said first signal and said second signal is reduced by said phase difference.

15. (Canceled)

16. (Previously Presented) A device according to claim 14, wherein each of said first signal and second signal is a clock signal.

17. (Previously Presented) A device according to claim 14, wherein said first signal has a different rise time period (t_r) and a different signal fall time period (t_f) from said second signal.

18. (Canceled)

19. (Currently Amended) A device according to claim 14, wherein said circuit for producing said phase difference in said second signal produces a phase difference corresponding to at least [[the]] said signal rise time period (t_r) of said first signal or [[a]] said signal fall time period (t_f) of said first signal.

20. (Previously Presented) A device according to claim 14, wherein said display device is a projection type display apparatus including a transmission type liquid crystal panel and a light source for projection.

21. (Currently Amended) A display device comprising:
a display panel comprising a switching element for every pixel electrode;
a scanning line driving circuit for driving scanning lines of said display panel;
a signal line driving circuit for driving signal lines of said display panel, said signal line driving circuit comprising a plurality of latches;
a control circuit for controlling driving of said display panel;
a video signal processing circuit; and
a circuit for producing a phase difference in a second signal with respect to a phase of a first signal wherein the first signal and the second signal are input to each of said plurality of latches,

wherein said first signal has a reversed phase relation with said second signal,

wherein a signal rise time period (t_r) or a signal fall time period (t_f) is equal to or shorter than a half of a signal holding time period (t_c), [[and]]

wherein a length of said phase difference is at least said signal rise time period (tr) of said first signal or said signal fall time period (tf) of said first signal, and shorter than said half of said signal holding time period (tc), and

wherein noise due to said first signal and said second signal is reduced by said phase difference.

22. (Canceled)

23. (Previously Presented) A device according to claim 21, wherein said first signal has a different rise time period (tr) and a different signal fall time period (tf) from said second signal.

24. (Canceled)

25. (Currently Amended) A device according to claim 21, wherein said circuit for producing said phase difference in said second signal produces a phase difference corresponding to at least [[a]] said signal rise time period (tr) of said first signal or [[a]] said signal fall time period (tf) of said first signal.

26. (Previously Presented) A device according to claim 21, wherein said display device is a projection type display apparatus including a transmission type liquid crystal panel and a light source for projection.

27. (Currently Amended) A driving method of a display device comprising the steps of:

driving scanning lines of a display panel including a switching element for every pixel electrode;

driving signal lines of said display panel using a circuit having a plurality of shift registers;

controlling driving of said display panel; and

producing a phase difference in a second signal with respect to a phase of a first signal which is input to at least one of said plurality of shift registers,

wherein said second signal is input to said at least one of said plurality of shift registers,

wherein said first signal has a reversed phase relation with said second signal,

[[and]]

wherein a length of said phase difference is at least a signal rise time period (t_r) of said first signal or a signal fall time period (t_f) of said first signal, and shorter than a half of a signal holding time period (t_c), and

wherein noise due to said first signal and said second signal is reduced by said phase difference.

28. (Previously Presented) A method according to claim 27, wherein each of said first signal and said second signal is a clock signal.

29. (Previously Presented) A method according to claim 27, wherein said first signal has a different rise time period (t_r) and a different signal fall time period (t_f) from said second signal.

30. (Currently Amended) A method according to claim 27, wherein [[a]] said signal rise time period (t_r) or [[a]] said signal fall time period (t_f) is equal to or shorter than [[one]] said half of [[a]] said signal holding time period (t_c).

31. (Currently Amended) A method according to claim 27, wherein said circuit for producing said phase difference in said second signal produces a phase difference

corresponding to at least ~~[[the]]~~ said signal rise time period (tr) of said first signal or ~~[[a]]~~ said signal fall time period (tf) of said first signal.

32. (Previously Presented) A method according to claim 27, wherein said display device is a projection type display apparatus including a transmission type liquid crystal panel and a light source for projection.

33. (Currently Amended) A method of driving a display device comprising the steps of:

driving scanning lines of a display panel including a switching element for every pixel electrode;

driving signal lines of said display panel using a circuit having a plurality of shift registers;

controlling driving of said display panel; and

producing a phase difference in a second signal with respect to a phase of a first signal which is input to at least one of said plurality of shift registers,

wherein said second signal is input to said at least one of said plurality of shift registers,

wherein each of said first signal and said second signal is a clock signal,

wherein said first signal has a reversed phase relation with said second signal,

wherein a signal rise time period (tr) or a signal fall time period (tf) is equal to or shorter than a half of a signal holding time period (tc), ~~[[and]]~~

wherein a length of said phase difference is at least said signal rise time period (tr) of said first signal or said signal fall time period (tf) of said first signal, and shorter than said half of said signal holding time period (tc), and

wherein noise due to said first signal and said second signal is reduced by said phase difference.

34. (Canceled)

35. (Previously Presented) A method according to claim 33, wherein said first signal has a different rise time period (tr) and a different signal fall time period (tf) from said second signal.

36. (Canceled)

37. (Currently Amended) A method according to claim 33, wherein said circuit for producing said phase difference in said second signal produces a phase difference corresponding to at least [[the]] said signal rise time period (tr) of said first signal or [[a]] said signal fall time period (tf) of said first signal.

38. (Previously presented) A method according to claim 33, wherein said display device is a projection type display apparatus including a transmission type liquid crystal panel and a light source for projection.

39-45. (Canceled)